

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently amended) A modular backplane for an industrial computer comprising:

a first modular backplane segment having a first front side and a first back side, the first front side including a plurality of slots, ~~and~~ the first back side including a first dedicated connector;

a second modular backplane segment having a second front side and a second back side, the second front side including a plurality of slots, ~~and~~ the second back side including a second dedicated connector; and

a bridge module having two connectors, one of which is engaged with the first dedicated connector and the other is engaged with the second dedicated connector, thereby communicatively connecting the first and second modular backplane segments,

wherein the first and second dedicated connectors are provided in an area where no slot is formed.

2. (Original) A modular backplane for an industrial computer according to claim 1, wherein the bridge module further comprises a circuit board and a bridging integrated circuit.

3. (Original) A modular backplane for an industrial computer according to claim 1, wherein the height of the bridge module is less than that of the slot.

4. (Original) A modular backplane for an industrial computer according to claim 3, wherein the height of the bridge module is less than 16mm.

5. (Original) A modular backplane for an industrial computer according to claim 1, wherein the width of the bridge module is less than 12HP.

6. (Original) A modular backplane for an industrial computer according to claim 1, wherein the length of the bridge module is less than 94mm.

7. (Canceled)

8. (Currently amended) A modular backplane for an industrial computer according to claim 7₁, wherein the first dedicated connector is disposed in an area between a right-most pair of slots in the front side of the first modular backplane segment, and the second dedicated connector is disposed in an area between a left-most pair of slots in the front side of the second modular backplane segment, and vice versa.

9. (Original) A modular backplane for an industrial computer according to claim 1, wherein the first back side and the second back side each further include a plurality of slots.

10. (Original) A modular backplane for an industrial computer according to claim 9, wherein the slots include J3, J4 and J5 connectors.

11. (Original) A modular backplane for an industrial computer according to claim 9, wherein the slots may provide for the insertion of add-in cards.

12. (Original) A modular backplane for an industrial computer according to claim 1, wherein the slots include J1, J2, J3, J4 and J5 connectors.

13. (Currently amended) A ~~module~~ modular backplane for an industrial computer according to claim 1, wherein the slots in the first front side provide for the insertion of a system slot board and a plurality of peripheral boards and all of the slots in the second front side for the insertion of a plurality of peripheral boards, and vice versa.

14. (Original) A modular backplane for an industrial computer according to claim 1, wherein the first front side and the second front side each include seven slots.

15. (Currently amended) A modular backplane for an industrial computer comprising:

a plurality of modular backplane segments, each modular backplane segment including a front first side and a back side, ~~in which~~ the front side ~~has~~ including a plurality of slots, ~~and~~ the back side ~~has~~ including a primary dedicated connector and a secondary dedicated connector; and

a plurality of bridge modules for connecting the modular backplane segments, each bridge module having a pair of connectors, one of which is engaged with the primary dedicated connector in one of the modular backplane segments while the

other connector is engaged with the secondary dedicated connector in its neighboring segments, and vice versa, such that all the modular backplane segments are communicatively connected ~~with another~~,

wherein the primary and secondary dedicated connectors are provided in an area where no slot is formed.

16. (Original) A modular backplane for an industrial computer according to claim 15, wherein the bridge module further comprises a circuit board and a bridging integrated circuit.

17. (Original) A modular backplane for an industrial computer according to claim 15, wherein the height of the bridge module is less than that of the slot.

18. (Original) A modular backplane for an industrial computer according to claim 17, wherein the height of the bridge module is less than 16mm.

19. (Original) A modular backplane for an industrial computer according to claim 15, wherein the width of the bridge module is less than 12HP.

20. (Original) A modular backplane for an industrial computer according to claim 15, wherein the length of the bridge module is less than 94mm.

21. (Canceled)

22. (Currently amended) A modular backplane for an industrial computer according to claim ~~21~~15, wherein the primary and secondary dedicated connectors are provided in areas between a left-most pair of slots and a right-most pair of slots, respectively, in the front side of the modular backplane segment, and vice versa.

23. (Original) A modular backplane for an industrial computer according to claim 15, wherein the back side further include a plurality of slots.

24. (Original) A modular backplane for an industrial computer according to claim 23, wherein the slots include J3, J4 and J5 connectors.

25. (Original) A modular backplane for an industrial computer according to claim 23, wherein the slots may provide for the insertion of add-in cards.

26. (Original) A modular backplane for an industrial computer according to claim 15, wherein the slots include J1, J2, J3, J4 and J5 connectors.

27. (Currently amended) A ~~module~~ modular backplane for an industrial computer according to claim 15, wherein the slots in the front side of one of the backplane segments provide for the insertion of a system slot board and a plurality of peripheral boards and all of the slots in the front side of the remaining backplane segments for the insertion of a plurality of peripheral boards.

28. (Original) A modular backplane for an industrial computer according to claim 15, wherein the front side includes seven slots.

29. (Currently amended) A monolithic backplane for an industrial computer comprising:

a first ~~modular~~ backplane segment having a first front side and a first back side,

the first front side including a plurality of slots, ~~and~~ the first back side including a first dedicated connector;

a second ~~modular~~ backplane segment having a second front side and a second back side, the second front side including a plurality of slots, ~~and~~ the second back side including a second dedicated connector;

a bridge module having two connectors, one of which is engaged with the first dedicated connector and the other is engaged with the second dedicated connector, thereby communicatively connecting the first and second ~~modular~~ backplane segments,

wherein the first and second dedicated connectors are provided in an area where no slot is formed.

30. (New) A modular backplane for an industrial computer according to claim 1, wherein the back side has a first area where a plurality of slots are provided, and a second area where no slot is provided, the first and second dedicated connectors are provided in the second area.

31. (New) A modular backplane for an industrial computer according to claim 30, wherein the front side has a third area where the slots are provided, and a

fourth area where no slots are provided, the first and second dedicated connectors are provided in the second area which corresponds to the fourth area.